

by other American physicians; if so, they should be communicated for the benefit of the medical profession, and perhaps for the cause of humanity. It is at the same time more than probable that the disease has in many instances been communicated, and even proceeded to a fatal termination, without its character ever having been suspected. The disease is not an ordinary one, incidental to the human family, nor does it fall within the regular study of the medical profession; and it is possible that comparatively few physicians have ever observed the disease even in the brute creation. In the case above mentioned, the nature of the disease had never been suspected until after a lapse of ten months from the period of its commencement. And it is very possible that it might have passed unrecognised by the writer of this article had he seen it at an earlier stage, whilst as yet it was confined to the limbs and extremities, where it might have been mistaken for mercurial rheumatism or some anomalous disorder.

The fact of its being communicable to the human system entitles it to a place in our nosologies, text books, and practical systems; and I hope that the editor of the American Cyclopædia of Practical Medicine and Surgery, will give it a place in his valuable work, and bestow upon it that consideration which its terrific, loathsome, and fatal character demands. As yet it is considered as one of the absolutely incurables, whether in the brute or human race. It is possible, however, that talent and skill may hereafter be directed to some remedy or mode of treatment that shall disarm it of its terrors and triumph over its fatality.

Mobile, May, 1837.

ART. VI. *Reports of Cases of Insanity, treated at Friends' Asylum, near Frankford.* By R. R. PORTER, M. D., Resident Physician.

Mind has been regarded as a distinct faculty, endowed with capacities for entering into different states, without involving correspondent changes in the nervous system. The advocates of this doctrine, among whom may be placed nearly all those who have written on mental philosophy, admit that there is a general and mysterious connexion between mind and matter, but suppose that the operations of the former are independent of the latter. On the contrary, the adherents of the phrenological system, together with others who have investigated the phenomena of mind, contend that all its powers and varia-

tions are determined by the condition or modification of separate portions of cerebral structure, and that the union between the two is so intimately and reciprocally compacted as to render it impossible to affect one, without the other undergoing a like and simultaneous change. This doctrine of the dependency of thought on organization, was maintained by many physiologists, long before the days of Haller, who believed the brain to be the seat of intelligence, yet supposed its special powers could never be located, owing to the intricate nature of the nervous system. Of late, the principle that the brain is the exclusive instrument of intellect and feeling, has attracted much attention among physiologists and anatomists; and believing it to be supported by reason and observation, we shall briefly state some of the arguments adduced in its favour. We are more anxious to do so, as it is not uncommon to hear physicians speak of insanity as purely a mental affection; and, in consequence of this view of the subject, regard the employment of physical agents in its treatment either as hazardous or useless. In more than one instance we have been requested by medical men, strongly imbued with the notion of the distinctness of mind and matter, to withhold the applications of medicinal means in the treatment of their insane relations, because it was supposed they would only occasion pain and torment, without a prospect of doing good. Further, a manager of a celebrated lunatic institution, lately informed me, that several years ago he and his colleagues were so prejudiced against the use of medical measures, as to object even to the election of physicians in their board, being fearful they might effect some innovation. At present, both medical and moral means are used; and the increased number of cures being nearly fifty per cent. more than formerly, fully proves the danger of regarding insanity in the light of a mental affection, requiring only moral treatment: therefore we proceed to show the intimate union between intelligence and organization. If the thinking and feeling principles acted independently of matter, they should not be suspended by the abstraction of stimuli from the brain, as happens during sleep and swooning: in the latter, the offices of the brain are interrupted by the equability of the circulation being suddenly disturbed; and are resumed only when the inequality is restored. It may also be added, that the effects which occur in the brain, take place in other parts of the body, whose functions, likewise, are suspended by the same influence.

Certain diseases of the brain, such as inflammation of its substance, apoplexy, and palsy, act as immediately upon the mental faculties, as do gastritis, pneumonia, and hepatitis, upon the functions of the stomach, lungs, and liver; why, therefore, not say with equal propriety, that to the brain belong the powers of understanding and

judgment; that indigestion and dyspnœa are referred to their respective organs? Analogy further shows, that in this life, mind displays its forces by means of corporeal organs, inasmuch as all the senses of vision, smelling, tasting, and hearing, require an organic apparatus for their respective manifestations; and the results of comparative anatomy, when fairly examined, tend to establish the same opinion; they prove that intelligence and propensity are proportionate to the size of the cerebral organs; and when in any animal new distinct portions of brain have been discovered, observation in numerous instances has shown they originated separate and distinct powers or affections.

Again, there are no instances where the integrity of thought was preserved on the destruction of the brain. Mechanical injuries of its substance, of a limited nature, frequently, if not invariably, affect the health of one or more of its functions. The power of pressure on an exposed surface of dura mater to suspend consciousness, is well known; in many cases of congenital idiocy, the cerebral structure is but partially developed, and the displays of intelligence and sentiment are also limited; hence writers on insanity often describe idiots remarkable for religious feeling, for mechanical talent, and musical powers; while in those instances where the brain is very much below the usual size, there is almost an entire absence of reason, sentiment and desire. All of these phenomena accord with the doctrine of the brain being the instrument of the mental powers, and militate strongly against the supposition that mind and matter are distinct entities, as taught either directly or indirectly by metaphysicians; neither by it can be explained the effects of alcohol, of narcotics, and of local abstractions of blood from the brain, which sometimes almost instantaneously calm the most furious maniac.

The mental phenomena attendant on childhood, their deterioration in old age, the successive expansion of the brain, and the destruction of particular mental powers by certain lesions of the cerebral mass, are at variance with the notion of mind operating separately from organization. If the mind operates separately from organization, its exhibitions should be as perfect during infancy as in mature years, and should remain as active when the body is tottering with old age as they were in the vigour of its health, but daily observation declares to the contrary. The facility with which knowledge is acquired bears uniformly an exact relation to the size, structure and healthiness of the brain. In childhood the mental capacities are weak and limited, the mind cannot grasp forcibly at truth, it seems only adapted to the reception of facts; but as the cerebral organs enlarge, and acquire consistency, the faculties of judgment and reason are expanded, and

are enabled to collate into useful and stupendous systems of knowledge the important truths collected in former days; but as life declines, the nervous, like the osseous, vascular, and muscular systems, loses pliancy and vigour, while its functions with theirs become deteriorated. We repeat that the progressive developement of the mental phenomena, their enervation by disease, and decrepitude, and the characters of idiocy, afford strong arguments in favour of the truth of the proposition we have been advocating; for none will deny that the manifestations of understanding, feeling, and desire, correspond to the growth of cerebral matter, and that they undergo peculiar changes in the decline of life.

I shall now go on to illustrate by cases some of the diseases of the brain, giving rise to the different forms of insanity, beginning with mania.

CASE I. *Mania, preceded by partial insanity, cured by local depletion.*—J. H. æt. 18, a farmer, of New Jersey, was admitted on the 17th of March, 1835. The certificate states the duration of the case to be ten months, and that it supervened immediately on an attack of influenza, attended with sore throat and great pain in the head. On the 8th of May* he was suddenly seized with a paroxysm of mania, and soon became so violent that it was difficult to restrain him from injuring himself and others.

9, P. M. *Physical state.* Muscles flabby, large; eyes gray; hair brown; stature tall; complexion fair; motion quick; tongue moist; countenance wild, daring; face pale; pupils dilated, fixed; no abdominal tenderness; refuses food and drinks; snaps at every thing carried near the mouth; pulse small, round, cannot be numbered owing to muscular agitation; respiration hurried; heart's motion quick, rapid, tumultuous; makes great efforts to free himself of restraint.

Mental phenomena. Thoughts incoherent, irrational; remarks obscene, insolent, profane, vindictive, uttered in a loud and boisterous tone; alternately cries, ejaculates short sentences, swears, laughs, sings and raves furiously. Attention cannot be fixed; abuses all around him. Ordered $\frac{3}{4}$ xi. of blood taken from occiput; directly after the operation he became calm, rational, and declared the head was relieved of pain and pressure; begged the abstraction of more blood. Room darkened; cold cloths applied to the shorn scalp; patient kept in the tranquillizing chair; diet farinaceous.

* Previous to this period I had not commenced my notes on the case, having entered the asylum as resident physician only two days before. The aspects of the case, I understand, have altered little or none since his admission.

11th. Since the 8th has been calm, but dull and unwilling to converse. This morning heat of scalp augmented; sensibility of pupils dull; tongue coated with whitish fur, moist; constipation; pulse 69, full, strong; obedient, grave, fearful of some impending evil; conversation rational; consciousness of late events indistinct. Cupped \bar{z} vi.; give ol. ricini \bar{z} ss.

14th. Last night pulse was 82; mind confused; memory of persons and of transactions more impaired. Was cupped \bar{z} viii.; blisters were put on the ankles. 10 A. M. heat of scalp increased; countenance wild; no pain in head; face alternately flushed and pale; appetite moderate; pupils contracted; bowels confined; pulse 70. At times he screams loudly for a few minutes, but soon controls his passion; wanders in speech; ignorant of his situation; recollections of the past very turbid. Cupped \bar{z} x.; scalp covered with ice; give ol. ricini \bar{z} ss. Blisters dressed with savin cerate.

16th. At the dawn of day was found dashing himself against the walls of his room, and covered with blood. 8 A. M. sensibility much diminished; muscular strength rather increased; scalp hot; pulsations of temporal and radial arteries small, weak, rapid, 127; heart's motion tumultuous; countenance ferocious; pupils nearly natural; tongue coated with yellowish fur; skin of body moist; face flushed at intervals; squinting; no strabismus; conjunctiva injected minutely; muscles of face in constant motion; indifferent to sounds; features mobile; eyes shiny; respiration easy; deglutition easy; no abdominal tenderness; bowels moved yesterday; under constant muscular agitation; eats ice with avidity; refuses food. Every act and expression highly extravagant; heedless, or unconscious of surrounding circumstances; regards his attendants as enemies, and invokes terrible imprecations on them; swears; bites; distorts every part of the body in anger; vociferates disconnectedly to the extent of his voice. Cupped \bar{z} ix.; soon after the pupils were dilated; face pale; mind tranquil; body less agitated and confusion of intellectual faculties much diminished. Directed all restraint taken off, and the patient put to bed. *Evening.* He had at noon another furious paroxysm, which continued three hours; exhaustion followed, when the face was pale, death-like; pulse wiry; body covered with cold perspiration; muscular strength reduced; with difficulty maintained an erect posture; voice low, feeble. Ordered him put to bed, and to take egg and milk beaten up together.

17th. Slept part of the night; heat of scalp normal; eye lids red; face pale; features wan; appetite bad; eyeballs restless, squinting; muscles quiet; pupils natural; pulse 104; tongue red at edges; bowels moved; complains of weakness. Mind composed; no recollec-

tion of yesterday's events; listless in conversation. Blisters dressed with savin cerate; diet, animal soup, milk and eggs.

20th. Improving; has slept soundly for several nights; countenance dull; no cephalalgia; heat of scalp normal; pupils contracted; face pale; squinting continues; stronger; skin of body moist, oily; appetite better; bowels regular, stools yellow, consistence good; pulse 86; tongue moist, clean; converses reluctantly; filial feeling suspended; has no desires; performs every thing mechanically. Knows not where he is, or why brought here. Blisters kept discharging.

22nd. No pain in the head; sleeps well at night; temperature of body uniform; countenance dull; pupils rather contracted; tongue furred; respiration pure, chest anteriorly resonant on percussion; pulse 70; indifferent about food; muscular movements slow and hesitating. At times is obstinate; easily excited to anger and resistance. Saw his parents, seemed pleased; manifested no interest about domestic concerns; had no desire to return home. Give *ol. ricini* ℥ss.

27th. Was kept awake last night by pain in the head; pupils contracted; heat of scalp augmented in front; countenance grave; tongue pointed, red at the edges, moist; face pale; heat of body natural; pulse small, weak, 64. Some epigastric tenderness on pressure; bowels regular; appetite improving; mental powers still dull; unable to recall the names of attendants; indifferent about time, place, and circumstances; never smiles, or speaks of his own accord; questions are answered slowly, and in monosyllables. Cupped over abdomen; rides and walks out daily; blisters are healed.

June 9th. He has his natural sleep; pupils normal; scalp pleasantly warm; skin of body perspirable; tongue clean; countenance sedate; pulse 60, full, strong; bowels regular; slow in speech and muscular movements. Perception of recent events more acute than his conception of past ones. While riding out to-day he made several voluntary remarks about the scenery, prospects of the crops, &c. when his countenance became lively and cheerful for the first time since his illness. Diet full.

27th. For more than two weeks has been engaged in various duties on the farm; works industriously and eats heartily; still there is a gravity about him, an air of surprise when spoken to, an hesitancy in answering questions, which lead us to fear his convalescence is not perfect.

July 16th. Discharged, well.*

* The father of this patient thought insanity was a mental affection, and as such, beyond the control of medicine; he, therefore, had resolved to build a small hut, on a corner of his place, and there confine his son, by "*chain and ball*," till death

Remarks. Mania, when fully confirmed, is generally supposed to be permanent and continuous for days, weeks, and even months, and finally, if neither restoration nor dementia ensue, to run into chronic mania; but such forms of the disease must be comparatively rare, as we have never met with a solitary instance of the kind. The case which has been, and those to be detailed, assumed evidently a paroxysmal form, and were accompanied with well marked intermissions, of longer or shorter duration; during these, however, the brain continued in an excitable state, which prevented the mind from recovering its wonted clearness and composure. It will be observed that the paroxysms in this case were fewer than in the second case, and of shorter duration than in the third case, while in the fourth case the paroxysmal character was lost on the supervention of fever.

The maniacal fits were all attended with symptoms indicative of greater or less determination of blood to the brain: such as heat of scalp, pain in the head, coldness of the extremities, rolling of the eyeballs, injection of the conjunctiva, flushed face, beating of the carotids, increased frequency in the pulsations of the heart, of the temporal and radial arteries, which pointed out the propriety of local depletion, of the application of cold to the scalp, and of heat and rubefacients to the lower extremities. By these means the violence of the paroxysms was uniformly diminished, and their recurrence was prevented by taking blood from the scalp during the intermissions.

CASE II. Mania; duration three days; not constitutional; supervening on, and alternating with, partial insanity; followed by fever; cured.—Mr. S—, a Friend, of Philadelphia, by trade a mason; entered on the 23d of May, 1836. During childhood much given to masturbation; general health good; business habits active; disposition kind, filial; mental capacities ordinary. His friends date the origin of the disease from the period of its violence; though for several months they say he has been less ardent in the pursuit of wealth than formerly; more grave in character; has also shown an unusual concern about his bodily health, and was often seized with a dread of dying, while apparently in good health. In the spring of 1835, having made, as he supposed, ample arrangements for meeting all his indebtedness, he undertook the erection of a house; at first his liabilities were promptly met, but unexpected difficulties were encountered in adjusting the second or third instalment, at which he was so much worried and perplexed, as to doubt the propriety of the under-

should relieve the unhappy sufferer; but fortunately, through wise counsel, a different course was pursued.

taking; for he thought he had commenced what he could never accomplish; nevertheless, it was finished apparently to his satisfaction; but the mental excitement, which had continued for months, remained after the cause had ceased; in fact, it seemed to increase, inasmuch as he was now under the influence continually of groundless fears respecting his health and pecuniary matters; the former, he thought, was so precarious, as to justify the abandonment of his trade: at this time his appetite was bad, his digestion irregular, and he allowed himself but little time for sleeping. On the 20th of this month the fears of his friends were increased by some act of violence which he committed. They endeavoured to persuade him to remain at home, (for he was in the habit of spending most of his time in walking about, without any special object in view;) but persuasion being useless, compulsion was resorted to, when he got highly excited, and struck his father severely in the face, and escaped from the house, and ran into a store, where he immediately commenced to tumble the goods into the street; was overpowered by numbers, carried home, and was calm some hours. The paroxysm again came on, when he resisted violently, and escaped the second time, and was next found on top of the chimney, pulling off and hurling the bricks into the street, regardless of the safety of those passing by.

Present state. Five hours after admission, stature small; muscles large, compact; hair fine, brown colour; eyes blue; face ruddy; motion quick; head small; anterior development large; heat of scalp increased laterally and posteriorly; pulsations in temporal arteries 128, turgid; front part of head painful, and "feels as if it was very much enlarged;" conjunctiva injected; pupils contracted, sensible; countenance stupid; tongue moist, tumid, furred; respiration easy; no epigastric tenderness on pressure; frequently sighs; pulsations of radial arteries 128, strong; hands and feet warm.

Mental Phenomena. He remained quiet for half an hour after being placed in a room, then began to pound violently against the door, at the same time screamed, cursed, and raved. In a few moments every thing about him was disturbed and partly destroyed. When the nurse entered the room he was attacked ferociously, and though a powerfully strong man, it was some minutes before he could control the violence of the patient. The paroxysm continued one hour. At present he has no recollection of the late excitement, though he knows he is subject to "sudden strange impulses:" fearful of being murdered, implores protection. Cupped over occiput; syncope induced after the loss of $\frac{3}{4}$ of blood; room darkened; diet farinaceous.

24th. Slept till 4 o'clock this morning, then rushed out of bed, stripped himself naked, and attempted to break the door by running and throwing himself against it. With a demon-like countenance he resisted the attempts of the nurse to enter his room. When overcome, he poured forth volleys of yells, curses, and hideous sounds. In an hour was composed, rational; expressed regret over the past "misconduct." The calm continued about thirty minutes, and was succeeded by another paroxysm of mania. At present, 10 A. M., rational; memory confused; by an effort recalls many of the events of the morning: no cephalalgia; hair dry; scalp loose; skin of forehead soft; scalp generally hot; conjunctiva minutely injected; pulsations of temporal arteries 84; appetite strong; pupils contracted; flashes of light before the eyes; countenance sane; tongue clean at the tip and edges, rest furred, pasty; bowels moved yesterday; skin of body pleasant; pulsations of radial arteries strong, 84; heart's motion regular. Apply cold cloths to the scalp; give *ol. ricini* ℥ss.; and cold acidulated drinks.

25th. Last evening had two short fits of raving, followed by confusion of thought and loss of memory. 7, A. M., slept till three o'clock this morning, when another paroxysm of excitement came on and continued for an hour; face is now of a bluish-red colour; eyelids blood-shot; pupils dilated; scalp hot; tongue tumid, pasty; pulse about 120; has constant eructations; skin of hands moist; abdomen not tender on pressure; countenance wild, maniacal; beating of the temporal and carotid arteries; muscular actions of the body violent; refuses food and drinks; shakes the head, stamps the feet, distorts the body, cries, swears, vociferates loudly, endeavours to bite and strike all who approach near him; thoughts wild, incongruous, and incoherent. Cupped over the abdomen; syncope was induced; give *pil. hyd. gr. i. t. d.*

28th. Since the 25th inst. he has had several maniacal paroxysms. They come on about the dawn and close of each day, and were characterized by a disposition to go naked, by preternatural muscular strength, by ferocity of action, volubility and loudness of speech, incoherence of ideas, horrible blasphemies and incongruous remarks. During the intervals the mind was bewildered and irascible. 3, P. M., skin of forehead of a dark red colour, cool; scalp loose, hot; ears cold; pupils contracted; conjunctiva less injected; eyeballs restless, sunken; emaciated; tongue dry, of a brownish colour, rough, less tumid; heart's motion 96, strong; skin of hands and feet cold; capillary circulation weak; pulsations of radial arteries 96, strong; abdomen tender on pressure; bowels confined; refuses food and

drinks; deglutition has not been difficult; respiration easy; memory much impaired; intelligence languid; thoughts erratic; answers are irrelevant; mistakes friends for enemies; vindictive and vociferous. Cupped over abdomen $\tilde{\text{Ziv.}}$, pulse fell to 88; give oil $\tilde{\text{Zss}}$; apply warm bricks to the feet and fomentations over the abdomen.

29th. Slept soundly till 3 o'clock this morning; from that time noisy till after daylight. 9, A. M., scalp now hot; eyeballs more sunken; countenance more lively; tongue moist; anorexia; frontal capillary circulation more active; pulsations of temporal and radial arteries weak, 96; pupils dilated; conjunctiva moderately injected; teeth dry; gums spongy; tongue moist, furred with a loose white coat; heart's motion irregular; hands cool; tenderness of abdomen on pressure remains; muscular agitation continues; fearful of being "anatomized;" cannot describe his feelings; remarks are contradictory, and have little or no relation to the questions proposed. Cupped over the belly $\tilde{\text{Ziii.}}$; feet to be bathed frequently with brandy and red pepper; stop pil. hyd.

31st. Has had no maniacal paroxysm for 48 hours. Last night blisters were applied to the ankles, but they scarcely reddened the skin; slept part of the night; "no pain in head;" eats better; heat of scalp not much increased. The events of the last ten days are indistinctly remembered; complains much of exhaustion, and is scarcely able to walk across the room.

June 1st. Scalp loose, heat normal, hair dry; pulsations in temporal and radial arteries 100, regular; face of a dull red colour, sometimes flushed; pupils natural; tongue moist; appetite improving; countenance at times animated; bowels regular; skin of hands and feet pleasant. Intelligence still dull; during conversation his ideas become so confused that he is unable to finish a sentence correctly; fears of danger are ever present. Of his own accord got up, dressed, and walked into the day room. Diet, vegetable.

19th. During the last three weeks he has regained strength very slowly; for the most part has slept soundly at nights. Heat of scalp has occasionally been augmented; headache was often present, especially after restless nights; appetite moderate; bowels regulated by laxatives; pulse has been variable, sometimes up to 110, then down to 80; skin of hands cool; countenance has been grave; much troubled with eructations; contraction of pupils; hesitancy of speech and slowness of muscular movements. He never offers a spontaneous remark; stands for hours leaning on the window-sill, as if in deep thought; yet, when asked, is unable to tell the scope of his meditation. Occasionally he has been vindictive; always sullen; shows no interest in any employment or amusement which he undertakes. Cupped $\tilde{\text{Ziv.}}$

July 17th. Since the date of last note there has been an increase of physical and mental listlessness; actions for the most part seemed mechanical; sleeps badly at nights; has had frequently pains in the head; bowels confined; pulsations of temporal and radial arteries generally have been over 100; pupils more contracted; conjunctiva injected; heat of scalp augmented; appetite diminished; countenance angry, face often flushed; tongue clean; discontented, fretful; regards all around in the light of enemies; has manifested a morbid anxiety to return home. To overcome the pain in head, heat of scalp, excitement of pulse, &c., he was ordered to lose small portions of blood from the scalp frequently, in all above $\frac{3}{4}$ l.

Sept. 3d. On the 25d of August, fever of the continued form set in, and was kept up till yesterday. It was marked by frequency of pulse, heat of skin, great thirst, epigastric tenderness, with rose-coloured spots over the abdomen; suffusion of eyes, dry tongue, sordes on teeth. At first the bowels were confined, but towards the termination of the fever the stools were frequent and coloured with blood, no pain; after each one he declared he felt stronger. The mental powers were much depressed throughout the progress of the fever. He was cupped several times over the abdomen; sponged with cold water; cool mucilaginous enemata were often administered; cold cloths kept to the head, and cold acidulated drinks freely allowed. This morning the skin is cool; pulse about 70; tongue cleaning, moist; takes moderately of food; countenance cheerful; intelligence more active; speaks rationally of his present and past states, anxious to see his friends, and to return home *whenever his strength will allow him*. Diet, vegetable.

15th. He walks and rides out daily, and enjoys himself; says that he has during his illness suffered greatly from pain in the head. Appetite strong; sleeps soundly; digestion regular.

20th. Discharged well, and continues so up to this period, June, 1837.

Remarks.—At the commencement of the disease of Mr. S., depletion could be practiced only to a limited extent, owing to syncope coming on after the loss of very small portions of blood. The consequences were, that although the morbid changes in the brain were partly restored at an early period, still some of the cerebral organs remained impaired and gave rise to partial insanity, which was tedious in its course and difficult to overcome. In fact, there was no improvement in the latter until after the subsidence of the febrile excitement, when the mind immediately began to recover its usual tran-

quillity, and correctness of perceiving and comparing the objective and subjective relations of life.

It is easily understood how fever awakens new energies in, and imparts additional vigour to, a brain whose vital forces have been exhausted by long continued disease, as occurs sometimes in dementia, but we cannot comprehend the method whereby insanity was superseded in the above case by the febrile actions, unless we say the permanent irritation of the stomach operated on the principles of revulsion, and thus withdrew nervous and vascular excitement from the cerebral organs. This result, it is not reasonable to suppose, was brought about by the loss of blood during the fever, because the quantity was too inconsiderable, compared with that abstracted on former occasions.

CASE III. *Mania, complicated with gastritis, constitutional; cured.*—Mr. —, of New Jersey, a widower, was admitted on the 21st of October, 1835, æt. 45, a Friend; by trade a tanner; habits in business industrious; disposition penurious, supercilious, and irascible; mental capacities limited; religious feelings moderate.

Parentage.—His father, at the age of 40, was suddenly seized in the night with apoplexy; convulsions ensued, and death took place on the third day. The mother suffered several attacks of insanity, in one of which she died; a sister of her's was also deranged, and made several attempts at suicide; and a daughter of this sister, in a fit of derangement, destroyed herself. The history of the paternal grandfather unknown. The grandmother on the same side died of apoplexy: she had a son who died crazy at the Asylum. Mr. — had three sisters, two of whom were deranged; the youngest of three brothers died delirious at the age of 16, the second is subject to paroxysmal insanity; the third was never crazy.

24th. *Physical state.*—9, A. M., stature tall; complexion dark; motion quick; muscles small, firm; cheek bones prominent; eyes blue; hair fine, of a light brown colour. Since his admission, has been excited at times, wakeful at nights, discontented and fretful; at present these symptoms are increased. There are also restlessness of the muscular system, heat of scalp, wildness of the eyes, frequency of pulse, contraction of the pupils, with some incoherence of expression, and a disposition to assume fictitious characters. 2, P. M., heat of scalp much augmented; tongue reddish, moist, granulated, frequently protrudes and retracts it; skin of body hot; radial pulse over 100, soft, weak; "no pain in head," though he often compresses the scalp with his hands; deglutition easy; features wild, distorted; conjunctiva not injected; abdomen tender to pressure; stomach not irritable; feet

and hands cool; thirst great, refuses food; respiration easy; chest resonant on percussion; heart's motion weak, regular.

Mental signs.—He vociferates; thoughts evanescent, have little or no relation to his condition or to surrounding circumstances; they pass rapidly from subject to subject without order or connexion; expressions sententious, abound in rhymes, incoherent, ridiculous; thinks he is surrounded with devils and other aerial spirits; flies are transformed into demons; often ejaculates the words hell, fire, at the same time pressing strongly against the epigastric region. Room darkened, scalp shaved, ice applied to it; blisters on the ankles; cold acidulated drinks freely allowed.

25th. Last evening he was much exhausted; body was covered with cold perspiration; pulse very weak; mental excitement was augmented; raved all night. 8, A. M., scalp very hot; pupils contracted to a mere point; tongue red, moist; fauces dry; often exclaims *I am burning up*; temporal pulse 90, weak, soft; feet cool; skin of body pleasantly warm; countenance variable, generally ferocious; face pale; eyes glisten; hearing acute; smelling obtuse; vision perverted; sensibility diminished; muscular strength augmented, with great muscular mobility. Had a natural stool last night; abdomen tender to pressure; respiration humid; heart's motion weak; ejected from the stomach a worm four inches long. Thoughts disjointed, unnatural, fugacious, ludicrous; now performs an Indian dance, then goes through the manœuvres of a sailor; next paces the room in military pride, or is suddenly seized with a religious impulse, when he exhorts or falls prostrate on the floor, and begins to pray. This grotesque scene is heightened by violent cries, gesticulations, hideous yells, laughs, dismal groans and horrid blasphemies. The blisters drew well. Ordered him confined to bed by means of straps; cold cloths kept to the scalp; cold water given freely.

27th. Yesterday the maniacal excitement was diminished; head painful; pupils less contracted; 1 gr. of sulph. morph. was applied to the blisters, but failed to cause sleep. To-day more unwell; pupils much contracted; tongue of a dark red colour, dryish; hands cold; pulse small, weak, 85; abdomen tender on pressure; bowels moved by an enema; eyeballs restless; adnata clean; countenance maniacal, anorexia; passes urine freely; heart's motion weak, regular; great mobility of the muscles of the upper part of the body; face pale; often presses the hands against the temples; feet cool; all the external senses exalted or depressed; fauces dry; respiration hurried; eyeballs prominent; no injection of conjunctiva; no irritability of stomach; muscles of face distorted; corners of mouth filled with frothy saliva;

refuses food, takes cold drinks with avidity. Expressions boisterous, wild, incongruous, erratic; now religious, now profane; now dramatic, now poetic; now nautical, now pugnacious; endeavours to make his actions correspond to these multifarious dispositions, but before one is ended another is begun. Last night a blister was applied between the shoulders: ordered scalp rubbed with lin. cantharides, and hop fomentations placed over the abdomen.

28th. More rational; slept some last night; face sallow; forehead contracted; eyes sunken; face oily; heat of scalp normal in front, increased behind. Bowels moved twice by grs. vi. of calomel; fauces covered with tenacious mucus, to dislodge which he makes violent attempts. Says that he was much better this morning; pupils still contracted; countenance sane, haggard; eyeballs restless; tongue moist, edges furred with white; papilla enlarged; no actual headache, but vertigo on raising the head; pulse 80, small. Suddenly, without any external cause, he complained of pain in the head; the mind wandered, he became loquacious, boisterous, maniacal; abdomen less tender to pressure; feet cold; tares his clothes; misnames his attendants, some of whom he regards as old friends, others as inveterate enemies; strips himself naked; language highly offensive. Continue the applications of lin. cantharides to the scalp, and give him small quantities of arrow-root.

29th. After I left him yesterday he got worse and worse, till scarcely a ray of reason was perceptible; the raving continued till after midnight. 8, P. M., heat of scalp very much increased; pulsations of temporal arteries quick, strong, 100; pupils contracted; forehead contracted; eyes glisten; features wild; skin of body warm, dry. Bowels moved several times last night; radial pulse quick, frequent; often presses the hands against the temples, and shrieks out as if in pain; also compresses the epigastric region; tongue moist; distorts the face; great muscular agitation of the whole body; mental expressions are still wild and extravagant. Apply ice to the scalp, $1\frac{1}{2}$ grs. of morph. to the blisters.

30th, 6 P. M. He raved the former part of last night, and slept some towards morning; awoke partly rational, and has continued better all day, till within two hours; now in a paroxysm of mania similar to those described. Ordered $1\frac{1}{2}$ grs. of morphia, given by the mouth, and grs. ii. to be applied to the blisters.

Nov. 1st. Yesterday the pulse was about 70, weaker than it had been; head was painful; tongue moist; skin cool; feet swollen; legs in an erysipelatous state; hearing very acute; sight perverted; mind more composed. This morning, heat of scalp augmented; countenance

furious; pupils very much contracted; tongue dryish; forehead contracted; eyeballs rolling; muscles of mouth distorted; pulsations in temporal and radial arteries weak, soft, small, 100; heart's motion weak; tongue covered with white frothy mucus or saliva; refuses food and drinks; snaps at any thing carried near the mouth; general sensibility lessened; great muscular mobility; feet and hands cold; hearing acute. He slept the fore part of last night; at midnight began to rave, and has continued to do so from that time to this, almost without intermission. *Noon*—He still raves; tongue is dry, brownish; abdomen very tender on pressure. Ordered $\frac{3}{4}$ ss. of blood taken from abdomen, to scarify it freely, and rub liniment cantharides over the incisions; grs. v. sulph. morph. applied to blisters.

2nd. Yesterday he had a bloody stool, with tormina, tenesmus, and some vomiting. He raved till 1, A. M., when consciousness returned, and he conversed rationally for a few minutes, complained of drowsiness, then fell asleep, and slept till after daylight, when he was perfectly rational. 8, A. M., complains of exhaustion; face of a waxen white colour; strangury; very drowsy; heart's motion weak; tongue moist; pupils more dilated; muscular agitation ceased; skin moist; nausea, occasionally vomits. *Evening*—He has slept most of the day; now drowsy, falls to sleep while conversing; passes large quantities of urine, attended with some pain; feet still swollen; answers questions correctly. He has a proper conception of his present and past states; fearful of a relapse; irritable, captious, the most delicate attentions fail to satisfy him. Ordered the patient to be placed in another room.

5th. On the third instant his tongue was dryish, now moist; no tormina or tenesmus; when at rest has no pain in head; face pale, sallow, emaciated; pupils nearly natural; thirsty; pulse about 80; swelling of legs subsided; hearing more obtuse; sensibility much increased; complains of blisters and of muscular soreness; appetite moderate; constipation; totters when walking; for several days has had frequent returns of vomiting; sleeps soundly at nights; irascible and peevish. Blisters dressed with savin ointment; give him ol. ricini $\frac{3}{4}$ ss. Diet, animal soups, black tea, bread and butter.

10th. During the last five days has been improving: now in the day room. He is more excitable towards evening; sleeps soundly for the most part; pulse 60; appetite moderate; hearing obtuse; frequently at nights has unpleasant dreams; irritability of temper subsiding; conversation, if sustained for any length of time, causes pain in head. Diet full. Blisters healed.

13th. Restless nights (which he occasionally has) are followed by

pain in the head, and an increase of irritability of temper; bowels regulated by laxatives; appetite strong; hearing very obtuse. Rides and walks out daily.

Dec. 1st. Discharged, well.*

Remarks.—During the progress of this case the stomach became involved in disease, and symptoms of gastritis appeared; while at the same time the morbid actions of the brain were for a short period increased. This complication is not an unusual occurrence in mania; and though it places the life of the patient in more danger, it is generally, by careful management, successfully dissolved, when the maniacal symptoms abate and convalescence often speedily ensues, as seen in this and in the second and fourth cases.

The weak state of the pulse of Mr. — forbid the use of cups, except to a very small extent. On the propriety of depletion we are governed generally by the pulse; but if unequivocal signs of cerebral congestion or inflammation are present, with high maniacal excitement, topical blood-letting should be resorted to, without strict regard to the condition of the pulse. Confirmatory of this remark, we have unhappily met with more than one illustration where the lives of our patients, it is feared, were sacrificed by a dread of depletion.

Obstinate wakefulness is one of the most constant symptoms observed in mania: it often continues for many days and nights in succession, without that exhaustion following which so commonly happens in other affections. To relieve it, if not contra-indicated, anodynes should be given after depletion, and sometimes without, either by the mouth or applied to blistered surfaces, as was done in the third case. Here the effects of the morphia were seen for more than thirty-six hours after its application, during all of which intense drowsiness continued, and upon its subsidence he rapidly recovered. At the same time his hearing, which was previously very acute, became more and more dull, until lost almost in deafness.

CASE IV. Mania; followed by fever, with oppression of the mental powers; cured.—Mrs. B. A. S., of Pennsylvania, æt. 26, a Lutheran, entered June 7th, 1836; disposition kind; mental parts strong; careful in the performance of religious and domestic duties; general health

* He was taken home prematurely by his friends; the consequence was a relapse in less than a week, when he was returned to the Asylum, and remained here several months. For the most of the time he was apparently comfortable, till in March, 1836, he became highly excited, and refused food. On the second day he was compelled to eat, when he remarked, "you may force food into the stomach, but you cannot force it to remain there," and immediately ejected it. Thus he acted for ten days, when he calmly and suddenly died.

good; recently more or less subject to rheumatism. Her mother and maternal aunt have been deranged. In April last, after an easy labour, she gave birth to a child, and at the usual time got about. Just then the eldest daughter was taken ill, and continued dangerously so for several weeks, during all of which Mrs. S. watched over the sick couch with a mother's fondest care. Her strength was unequal to the task. The fears and anxiety she experienced, together with loss of sleep and appetite, reduced her already enfeebled health. The child improved, but the mother was ever by its side, till about ten or twelve days before her admission here, when she was confined to bed by an attack of inflammatory rheumatism, for which she was bled three times, and thereby entirely relieved. At the end of the third day the disease returned, and she was again bled; the pain now ceased, but the mind on one or two occasions seemed bewildered, which, however, at first did not attract much attention among her friends. On the day following she evinced evident signs of insanity, by talking wildly and in wringing the hands. From this period she slept none, up to the date of her entrance into the asylum.

June 8th. Physical condition.—Stature small, body delicate; muscles small, relaxed; emaciated; complexion fair; hair light brown; eyes black; motion quick; anterior development of head large, superior above the average height. Immediately after being placed in a room yesterday she stripped herself naked, and in a few moments shattered the glass, bowls and chairs to pieces, and hurled them with malignant fury at those who attempted to approach her. The face was flushed; eyes wild; pulse 130, soft, small, weak; tongue dryish. Ice was kept to the shorn scalp, and fomentations of hops and cicuta leaves to the abdomen. At present, 10 A. M., scalp pale, loose, heat augmented; cheeks flushed; pulsations of temporal arteries quick, weak, of carotids strong, 136; pupils dilated; eyeballs roll in their sockets, sunken; countenance ferocious; general restlessness of the muscles; tongue pale, moist, clean; breath bad, respiration easy; lips pale; appetite moderate; tenderness of the upper part of the spine on pressure; heart's motion quick, weak, regular, 134; no abdominal tenderness; skin of body cool.

Mental phenomena.—She manifests great maternal uneasiness; often starts, and shrieks at the imaginary cries of her children; thinks they are in some part of the house undergoing cruel operations, implores protection for them, and wrings her hands in despair; vociferates for a few moments, then is comparatively tranquil, when she correctly answers some questions, others she seems not to understand; memory confused, ideas wander. *Evening*—She has had since morning two

paroxysms of raving, during which she screamed, beat her head, and inflicted several wounds on the body by striking it against the walls of her chamber; they lasted about an hour. Give sulph. morph. $\frac{1}{4}$ gr.

9th. Slept none last night, often rushed out of bed and attacked with preternatural strength her attendants; was several times in the course of the night seized with tremors of the whole body. At present, heat of scalp increased; face flushed; pulse very weak, small, quick; pupils dilated; tongue moist; anorexia; bowels moved by an enema; stool natural. Raves incessantly; scalp covered with ice; patient kept in a chair by straps. Give cold mucilaginous drinks.

10th. Wakeful all night, frequently excited, and though carefully watched, she found opportunities to bruise herself very severely against the bedstead. $5\frac{1}{2}$, A. M. She has screamed constantly for the last two hours; heat of scalp much increased; countenance daring, wild; pupils dilated; general sensibility greatly diminished; pulse 134; heart's motion strong; tongue dry, red; thirst great; indifferent about food; deglutition easy; respiration hurried; raves and vociferates without forming articulate sounds. Cupped Zvi ; ice kept to scalp. Evening —After the loss of blood in the morning the pulse was not over 90, but in six hours fever came on; face flushed; head hot; tongue dry; skin hot; thirst great; mental powers oppressed. At present, face pale; tongue covered with whitish-yellow fur; skin hot; eyeballs sunken; forehead oily; pupils dilated; pulsations of temporal and radial arteries 112, small, weak; hands cold; bowels regular; consciousness dull; seldom speaks; drowsy. Sponge body with brandy and cool water; ice kept to head.

11th. Raved from 3, A. M., till after daylight. 8, P. M., fever commenced again about noon, and continues; heat of scalp now great; skin of body hot, dry; eyes suffused; conjunctiva injected; pupils dilated, sensible to strong light; pulsations of temporal arteries 112, turgid, strong; rigidity of the arms; countenance stupid; pulsations of carotids strong; cheeks flushed; heart's motion full, strong; some irritability of stomach; thirst intense; feet cold; lower extremities in constant motion; tongue dry; face shining. Disposed to leave the bed; now and then ejaculates broken sentences; then is silent for some time; insensible to surrounding impressions. Cupped Zxi from scalp; sponge upper part of the body with cold water; cold cloths kept to the head; takes Zss . effér. mixt. hourly.

12th. Slept an hour or so last night; often started and shrieked out as if in pain; fever remitted from 7 o'clock this morning till about noon. 8, P. M., countenance stupid; pulsations of temporal and radial arteries about 134; disposed to sleep; cheeks full; respiration

easy; heart's motion weak; lips pale; feet cool; skin of body hot; thirst; arms rigid and tremulous; body at times partly convulsed; sensibility low; fingers clinched; strabismus; left hand cool, right hot; mental powers much oppressed; seldom speaks; heedless to questions; give infus. digitalis \mathfrak{z} ss. with sulph. morph. $\frac{1}{16}$ gr. every hour. Cupped \mathfrak{z} iv.; fomentations over abdomen.

13th. Slept two hours last night; took \mathfrak{z} ii. infus. dig. and $\frac{1}{4}$ gr. of morphia. 11, A. M., fever came on early this morning, not so high as it has been. Heat of scalp lessened; pupils much contracted; sensibility still impaired; muscles of the arms rigid; pulse 112, soft; strabismus; countenance dull; bowels moved yesterday; thirst great; teeth dry; tenacious mucus between the lips; will not show the tongue; intelligence very dull. Cupped \mathfrak{z} iv. from occiput; body sponged with cold water, &c.

Evening. She has taken through the day \mathfrak{z} ii. of the infusion of digitalis; the morphia was suspended; fever continues; ordered the patient to be wrapped in blankets, steeped in hot water, for five minutes.

14th, 6 P. M. The scalp has been too hot all day, but there has been little or no fever; countenance more lively; has slept several hours soundly in the course of the day; thirst is much diminished; lips moist; tongue reddish, moist; pupils contracted; sensibility returned; complains of soreness of the muscles; pulse 84; bowels moved by enemata. Expresses much surprise from the fact of being surrounded with strangers. Consciousness is more perfect than it has been since her illness. Stop all medicines.

17th. For three days has had some fever in the afternoons; during the mornings the pulse was about 90; mind becoming more and more correct.

22nd. She is daily acquiring strength; now in the day room; pulse 82; appetite bad; bowels confined; sleeps soundly at nights; heat of scalp natural; face pale; three days since she took some animal soup, which caused fever and confusion of mind; both were relieved by taking \mathfrak{z} iv. of blood from the scalp. Diet, vegetable.

29th. She walks and rides out daily; anxious to return home; she is now considered convalescent.

July 1st. Discharged, well.

Remarks.—The general characteristics of mania in this case were lost by the supervention of meningitis, marked by slight convulsions or tremors of the body; by a disposition to sleep and to remain in bed; frequency of pulse; hot skin; great thirst; intense heat of scalp; contraction of the pupils; partial coma; and oppression of the mental

powers. Before their occurrence we were deterred from abstracting blood, in consideration of her enfeebled health previous to, and at the period of, her admission; but their presence showed a necessity for the daily abstractions of blood she underwent without regard to the strength of the pulse; and had this course of treatment been practiced earlier, it is likely the complication might have been prevented.

Frankford Asylum, June, 1837.

ART. VII. *Observations respecting Smyrna and its environs.* By
G. R. B. HORNER, Surgeon U. S. frigate United States.

Smyrna, the grand emporium of Turkey in Asia, contains about 150,000 souls, and is situated in lat. $38^{\circ} 26' N.$, and in long. $27^{\circ} 7' E.$, from Greenwich. It is built at the head of a beautiful gulf, bearing the same name, partly on the side of a very lofty hill meriting the epithet of a mountain, and partly on a plain extending for five or six miles in an easterly direction to the foot of a high ridge of mountains bounding the gulf on the north and the east. Through this plain flows the Meletis, a rapid and crystal stream, which tradition states to have been the favourite resort of the illustrious Homer, to whom Smyrna boasts she gave birth. The plain having a rich alluvial soil, being in a high state of cultivation, producing a vast quantity of vegetable matter, and being constantly in a state of great humidity, either from rain, snow, the Meletis, or from irrigation, may be justly termed unhealthy, as it must be an abundant source of malaria.

Between the mountains, overhanging the gulf on the north and its waters, is an extensive plain, which is in part finely cultivated, and in part overflowed and converted into pans for the manufacture of the muriate of soda, immense pyramids of which at all seasons may serve for landmarks to vessels navigating the gulf.

The face of the country on the west and south sides of the gulf correspond with that on the east and north, being marked by lofty mountains, overlooking alluvial and fertile plains. At the base of one of the mountains, on the south side, is a hot spring, of great celebrity; and some miles to the west of this one, near the town of Dourlack, is a sulphur spring, the waters of which are much esteemed by the inhabitants of the vicinity and those of Smyrna. The want of accommodations, however, prevent persons from resorting much to these springs.